

U.S. Application No. 10/805,869
AMENDMENT

AMENDMENTS TO THE CLAIMS

1. (canceled)
2. (canceled)
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24. (new) A microimpactor system comprising a fluid conduit having a plurality of spaced-apart rows of rigid microimpactors arranged in the fluid conduit substantially transverse to a main direction of flow of fluid through the fluid conduit, wherein each of said rows of microimpactors is formed by a microimpactor sheet having a plurality of openings in the sheet that define in each such sheet at least one line of two or more microimpactors, wherein each of said rows of microimpactors is in the plane of said sheet, and wherein each of said rigid microimpactors is a micropillar.

25. (new) The microimpactor system of claim 24, wherein microimpactors in at least two successive rows are offset from each other.

26. (new) The microimpactor system of claim 24, wherein microimpactors in successive rows are spaced apart at a distance defined by one or more spacer sheets interposed between the successive rows of microimpactors.

27. (new) The microimpactor system of claim 24, wherein the fluid conduit includes a fluid inlet and a fluid outlet, and each of said sheets is a flat sheet.

28. (new) The microimpactor system of claim 24, wherein the microimpactor system further comprises a means for moving fluid through the system.

29. (new) The microimpactor system of claim 24, further comprising means for applying an electrical charge to at least one microimpactor sheet.

30. (new) The microimpactor system of claim 29, further comprising means, upstream from said microimpactor sheets for applying an electrical charge to particles borne in a fluid transported through the fluid conduit.

31. (new) A microimpactor system comprising a fluid conduit having a plurality of spaced-apart rows of rigid microimpactors arranged in the fluid conduit substantially transverse to a main direction of flow of fluid through the fluid conduit, wherein each of said rows of microimpactors is formed by a microimpactor sheet having a plurality of openings in the sheet that define in each such sheet at least one line of two or more microimpactors, wherein each of said rows of microimpactors is in the plane of said sheet, and wherein a spacing between said

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rows of microimpactors is from about 1-15,000 microns, and wherein each of said rigid microimpactors is a micropillar.

32. (new) The microimpactor system of claim 31, wherein said spacing between said rows of microimpactors is from about 5-1600 microns.

33. (new) The microimpactor system of claim 31, wherein said spacing between said rows of microimpactors is from about 10-300 microns.

34. (new) The microimpactor system of claim 31, wherein said microimpactors are about 10 to 400 microns wide.

35. (new) The microimpactor system of claim 31, wherein said microimpactors are about 10 to 150 microns wide.

36. (new) The microimpactor system of claim 31, wherein the spacing between adjacent microimpactors in an individual sheet is from about 10 to 800 microns.

37. (new) The microimpactor system of claim 31, wherein the spacing between adjacent microimpactors in an individual sheet is from about 15 to 250 microns.

38. (new) The microimpactor system of claim 31, wherein said microimpactor sheet has a thickness in a range from about 0.1 to 10,000 microns.

39. (new) The microimpactor system of claim 31, wherein said microimpactor sheet has a thickness in a range from about 5 to 1,000 microns.

40. (new) The microimpactor system of claim 31, wherein said microimpactor sheet has a thickness in a range from about 20 to 250 microns.

41. (new) A microimpactor system comprising a first microimpactor sheet, a second microimpactor sheet, and a first spacer sheet between said first and second microimpactor sheets, wherein said first microimpactor sheet is rigid and comprises a first row that comprises a first spacing, a first microimpactor, a second spacing, a second microimpactor, and a third spacing, wherein said first and second microimpactors are in the plane of said first microimpactor sheet, and wherein said second microimpactor sheet is rigid and comprises a second row that comprises a fourth spacing, a third microimpactor, a fifth spacing, and a fourth microimpactor, and a sixth

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spacing, wherein said third and fourth microimpactors are in the plane of said second microimpactor sheet, wherein said first through sixth spacings define a fluid conduit that is adapted to receive a fluid flow which is substantially transverse to said first through fourth microimpactors, and wherein said first microimpactor comprises a first micropillar.

42. (new) The microimpactor system of claim 41, wherein said second microimpactor comprises a second micropillar.

43. (new) The microimpactor system of claim 41, wherein said first spacer sheet has a first thickness of from about 10-300 microns, wherein each of said first microimpactor and said second microimpactor has a first width of about 10 to 150 microns wide, wherein each of said first spacing, said second spacing and said third spacing is from about 15 to 250 microns, wherein each of said first microimpactor sheet and said second microimpactor sheet has a thickness in a range from about 5 to 1,000 microns, wherein each of said third microimpactor and said fourth microimpactor has a second width which is different from said first width, and wherein each of said fourth spacing, said fifth spacing and said sixth spacing is different from each of said first spacing, said second spacing and said third spacing.